



The Basics and Prevention of Lyme Disease in Maryland

Mary Muñoz
Epidemiologist
Office of Epidemiology and Disease Control Programs
DHMH



Objectives

1. Basics of Lyme disease
2. Statistics in Maryland
3. Prevention
4. Reporting suspected cases
5. Additional resources



Basics of Lyme disease

- First recognized among arthritis patients in Lyme, Connecticut, 1975
- Caused by bacterium
 - *Borrelia burgdorferi*





Basics of Lyme disease

- Symptoms (if noted)
 - Days to weeks
 - “bull’s eye” rash $\geq 2.5\text{cm}$
 - fatigue, fever, headache
 - stiff neck, muscle and joint pain
 - Months to years
 - aseptic meningitis, cranial neuritis
 - cardiac abnormalities
 - chronic arthritis





Basics of Lyme disease

- Get Lyme disease from tick bite!
(if ≥ 36 hours attachment)
- Blacklegged deer tick (*Ixodes scapularis*) carries bacterium

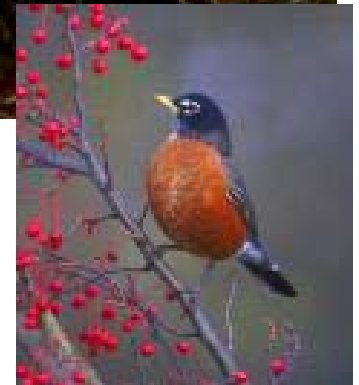
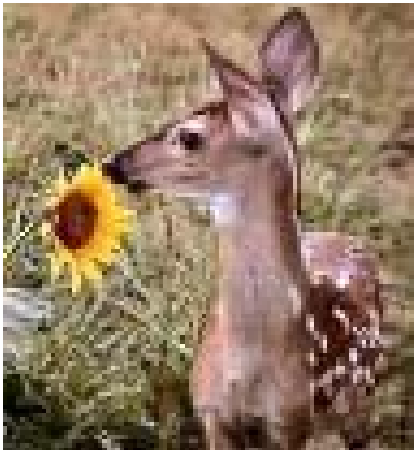


- Lyme disease (LD) leading cause of tick-borne disease in the United States



Basics of Lyme disease

- Tick maintenance
 - Deer
 - Mouse
 - Robin





Basics of Lyme disease

- Occurrences of LD dependent on
 - high rates of ticks infected with bacteria
 - increased tick and deer populations
 - increased interaction between people, deer and ticks
- Increase in LD infection
 - May, June, July, August, September
 - Can occur anytime of the year!



Statistics

- Maryland trends of Lyme disease
 - Approximately 700 to 1235 (2005) cases annually
- Number of cases varies by jurisdiction and year
- Cases associated with children and elderly



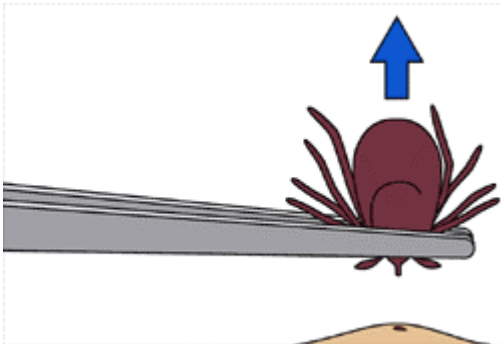
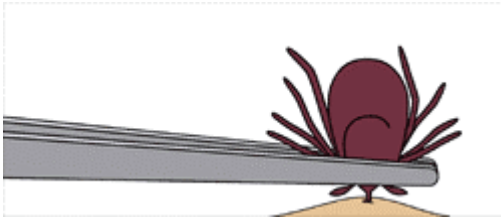
Prevention

- Educate campers, parents and counselors
 - Bug spray (max 30% DEET) to skin and clothes
 - Wear light-colored long sleeves and pants
 - Socks pulled over pants
 - Shoes (no open toes)
 - Avoid high-risk areas in the woods
 - Leaf litter, bushy areas
 - Check entire body for ticks (you and pets)
 - Promptly remove ticks with tweezers!



Prevention

- Tick removal



Remove a tick from your skin as soon as you notice it. Use fine-tipped tweezers to firmly grasp the tick very close to your skin. With a steady motion, pull the tick's body away from your skin.

Then clean your skin with soap and warm water. Throw the dead tick away with your household trash.

Avoid crushing the tick's body. Do not be alarmed if the tick's mouthparts remain in the skin. Once the mouthparts are removed from the rest of the tick, it can no longer transmit the Lyme disease bacteria. If you accidentally crush the tick, clean your skin with soap and warm water or alcohol. Don't use petroleum jelly, a hot match, nail polish, or other products to remove a tick.



Tommy's Tick Tips

Know the risks. Avoid the ticks.

Do this stuff

Stay on paths and trails when hiking in the woods.

Wear long sleeved light colored clothing.

Always check for ticks after being outdoors.

Have adults remove attached ticks with tweezers. Note date on a calendar.

Wear long pants tucked into your socks.

Don't do this stuff

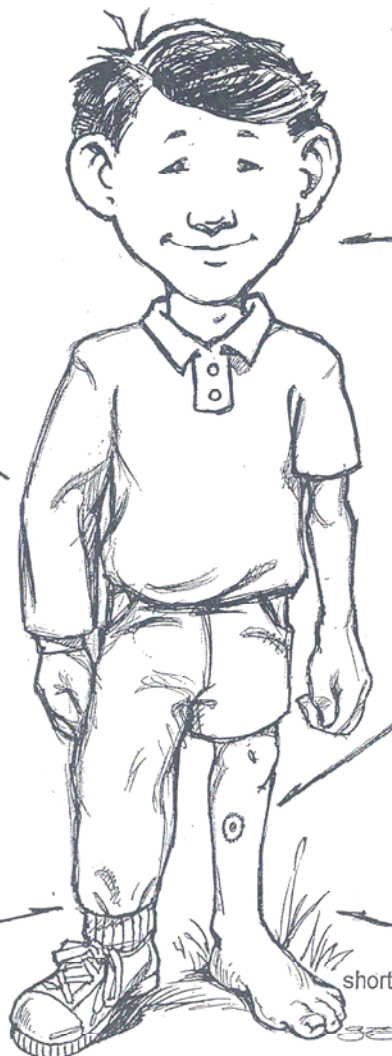
Don't spray repellent's on:
*your face
*hands
*sunburned skin
*rashes

Don't spray repellents indoors.

Don't ignore a bulls eye rash. Tell your parents.

Don't play in damp piles of leaves.

Don't go in tall grass or woods barefoot or in shorts or short sleeved shirts.



Anne Arundel County Department of Health
Communicable Diseases



Handling Suspected Cases

- Inform camp health nurse if child have rash, or tick attached ≥ 36 hours, or other acute symptoms
- Seek medical care immediately
 - Will then report to Local Health Department



Additional Lyme disease Resources

- Link in Community Services, DHMH website (under construction)
- Contact the Communicable Disease Program in your Local Health Department
- Office of Epidemiology and Disease Control Programs, DHMH
http://www.edcp.org/vet_med/lyme_disease.html
- Centers for Disease Control and Prevention (CDC)
http://www.cdc.gov/ncidod/diseases/submenus/sub_lyme.htm



Questions?

Mary Muñoz

Epidemiologist

Office of Epidemiology and Disease Control Programs,
DHMH

410-767-0584

mmunoz@dhmh.state.md.us